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SECTION 4 - SIDEWALKS AND CURB RAMPS

4.1.0 GENERAL

This section addresses pedestrian needs and identifies sidewalk and curb ramp requirements for the various street classifications.

4.2.0 SIDEWALK REQUIREMENTS

4.2.1 General Requirements

Sidewalks must be constructed between the curb line and the property line. The standard alignment is at the property line.

Should the available right-of-way between the curb and adjacent property line be of insufficient size to accommodate the requirements of this Section, alternative designs of the sidewalk may be constructed only with the approval of the City Engineer. The sidewalk shall be sloped 1/4 inch in (1) one foot and the area between the sidewalk and the curb shall be sloped a minimum 1/4 inch in one (1) foot above the curb and shall drain toward the roadway.

Sidewalks shall be constructed in accordance with the City's DACS - Standard Specifications Manual and in accordance with applicable provisions of the Americans with Disabilities Act of 1990, as amended (ADA).

4.2.2 Non-conventional Sidewalks

With the approval of the Director of Transportation Services and the City Engineer, an alternative sidewalk design (such as a hike and bike trail) may be substituted for a conventional sidewalk, provided that maintenance and public access agreements are provided and that they are accessible to persons with disabilities as defined and required in the ADA. Meandering sidewalks are encouraged in order to avoid trees or other natural features, provided that sufficient right-of-way is dedicated to accommodate them.

4.2.3 Bridges

Where sidewalks are required on bridges, they shall be a minimum of six (6) feet wide (clear of guardrail).

4.2.4 Sidewalk Omissions

Except as noted in Chapter 8, Subdivisions, City of Round Rock Code of Ordinances, 1995 edition, sidewalks are required.

4.2.5 State Facilities

Sidewalks are required on State-maintained highways. Sidewalks on State-maintained highways must be located in accordance with the requirements of the Texas Department of Transportation and as required by the ADA. Generally, sidewalks on State maintained highways must be located within the right-of-way adjacent to the property line.

4.3.0 CURB RAMPS

Sidewalks constructed to the requirements herein shall include a curb ramp wherever an accessible route crosses a curb. Curb ramps shall be designed and constructed in accordance with the City's DACS - Standard Specifications Manual and the requirements of the ADA. Where these standards conflict, the stricter design criteria shall apply and take precedent.

Prior to subdivision acceptance by the City, all concrete and/or paver stone work within the right-of-way shall be constructed in accordance with the design details shown on the drawings. This includes curb ramps located at the radii Point of Curvature (PC) and point of tangency of the intersection. In locations where there are "Tee" type intersections, the cross of the Tee (opposite the intersection street) shall have a ramp constructed in line with the ramp across the street.

The preferred alignment for new curb ramp construction is perpendicular to the vehicular flow of traffic and perpendicular to the curb.

The following curb ramp guidelines have been adapted from the Standards and Specifications of Article 7, Article 601B, Vernon's Texas Civil Statutes, Elimination of Architectural Barriers available from the Texas Department of Licensing and Regulation and from the ADA Accessibility Guidelines For Buildings and Facilities.

- A. Curb ramps shall be located so that they are not obstructed by parked vehicles and shall not intrude into vehicular traffic lanes.
- B. The least possible slope shall be used for any curb ramp. Curb ramp slope shall not exceed a 1:12 vertical rise to horizontal run ratio. Curb ramp wings shall not exceed a 1:10 vertical rise to horizontal run ratio (See Figure 4-1, in Section 4.4.0 of this Manual). Curb ramps to be constructed on existing sites or in existing buildings or facilities may have slopes and rises as allowed in Table 4-2 if space limitations prohibit the use of a 1:12 slope or less. A flat landing area with a minimum dimension of forty-eight (48) inches (1.2 meters) deep and as wide as the ramp area must be located at the top of each curb ramp. In existing right-of-way or street locations where existing property lines do not allow for this forty-eight (48) inch (1.2 meters) deep landing area, the wings or flared sides of the ramp must have a slope of 1:12 maximum. (See Figure 4-1, in Section 4.4.0 of this Manual).
- C. Sloped surfaces shall be stable, firm and slip-resistant. Ramp surface shall have a detectable warning surface system integral to the walking surface.
- D. Detectable warning system shall consist of raised truncated domes with a diameter of nominal 0.9 in. (23mm), a height of nominal 0.2 in. (5mm) and a center-to-center spacing of nominal 2.35 in. (60mm) and shall contrast visually with adjoining surfaces, either light-on-dark, or dark-on-light. (See Figures 4-3 and 4-4, in Section 4.4.0 of this Manual). The coloring agent used to provide contrast shall be an integral part of the walking surface.
- E. The width of the curb ramp shall be a minimum dimension of forty-eight (48) inches (1.2 meters) exclusive of flared sides or wings. On existing sidewalks

only, where forty-eight (48) inches (1.2 meters) is not feasible, a minimum width of thirty-six (36) inches (0.9 meters), exclusive of flared sides or wings shall be allowed. If a curb ramp is located where pedestrians must walk across the ramp, or where it is not protected by handrails or guardrails, it shall have flared sides. Curb ramps with returned curbs may be used where pedestrians would not normally walk across the ramp. (See Figure 4-5, in Section 4.4.0 of this Manual).

- F. Curb ramps shall be designed so that the "cradle" will allow wheelchair footrests to clear the adjoining surface during transition. The minimum angle from surface to surface shall be one hundred and seventy (170) degrees (see Figure 4-2, in Section 4.4.0 of this Manual).
- G. Curb ramps shall be located so as to provide a continuous accessible path of travel.

**TABLE 4-1
SIDEWALK REQUIREMENTS**

Street Classification	Requirement	Minimum Width Feet (Meters)
Local	Both Sides	4 (1.2)
Local Collector (No Parking)	Both Sides	4 (1.2)
Local Collector (w / Parking)	Both Sides	4 (1.2)
Major Collector (4-lane, 5-lane)	Both Sides	4 (1.2)
Major Collector (5-lane Divided)	Both Sides	4 (1.2)
MAD 4, MAD 6 or MAD 8	Both Sides	5 (1.5)
Source: City of Round Rock, Department of Transportation Services		

**TABLE 4-2
SLOPE AND RISE RATIOS FOR
ALTERATIONS TO EXISTING CONDITIONS**

Maximum Allowable Slope (%)	Maximum Rise	Maximum Horizontal Projection (RUN)
10% (1:10)	6-inches	60-inches
12.5% (1:8)	3-inches	24-inches
Source: <u>Americans with Disabilities Act of 1990, Section 4.1.6(3)(a)</u>		

4.4.0 Figures

Figure 4-1 Curb Ramp

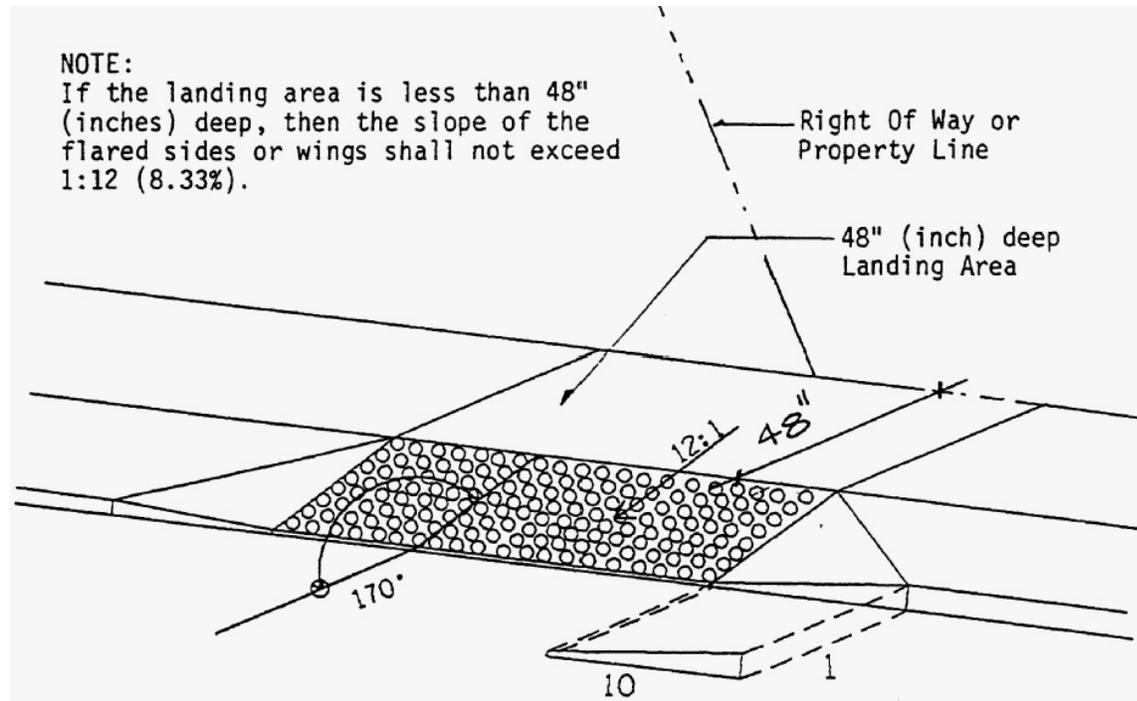


Figure 4-2 Curb Ramp Cross Section

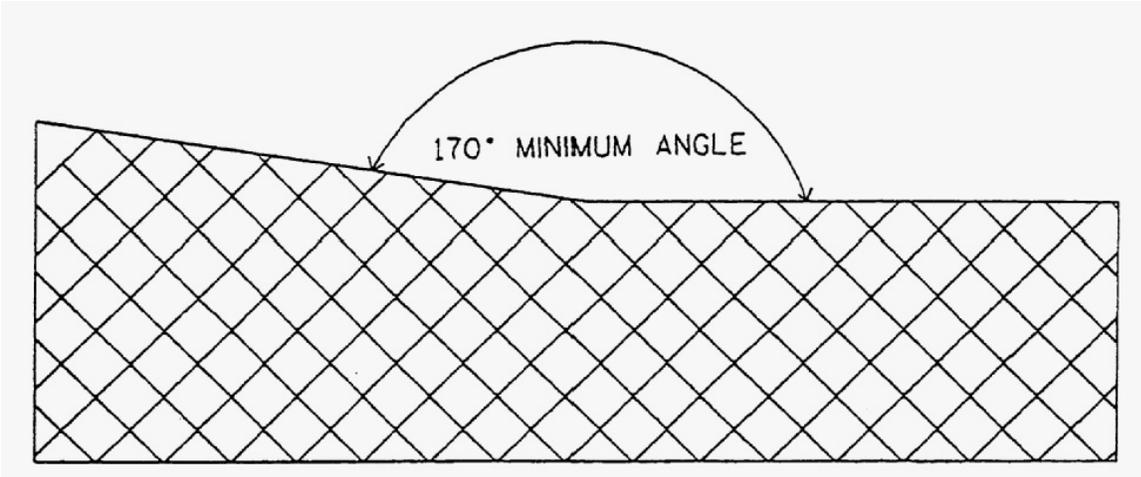


Figure 4-3 Detail of Detectable Warning on Ramp Walk Surface

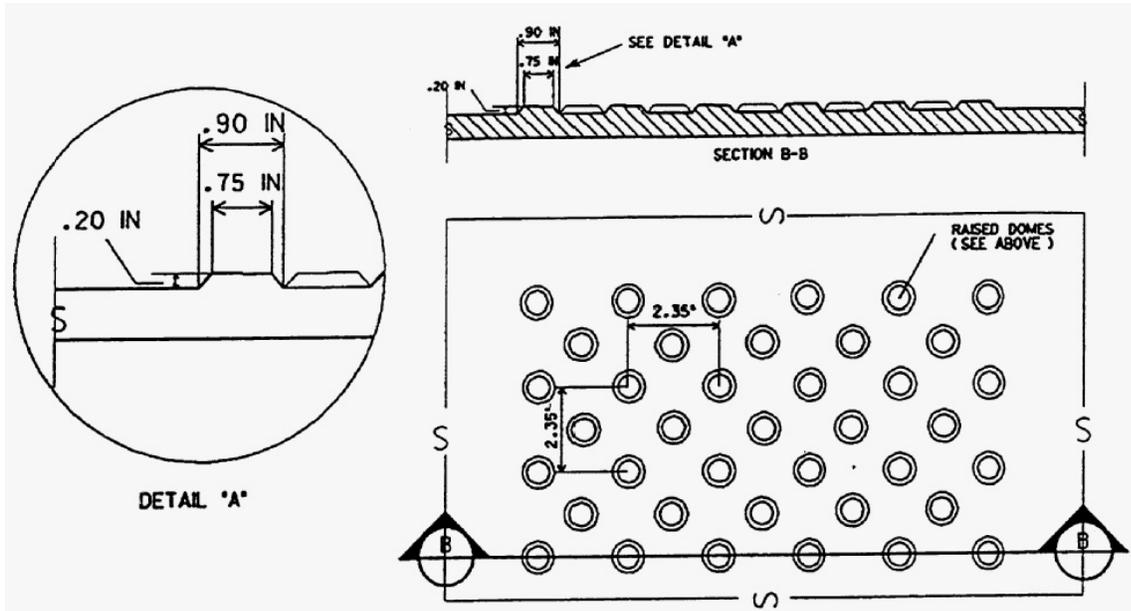


Figure 4-4 Detectable Warning on Ramp Walk Surface

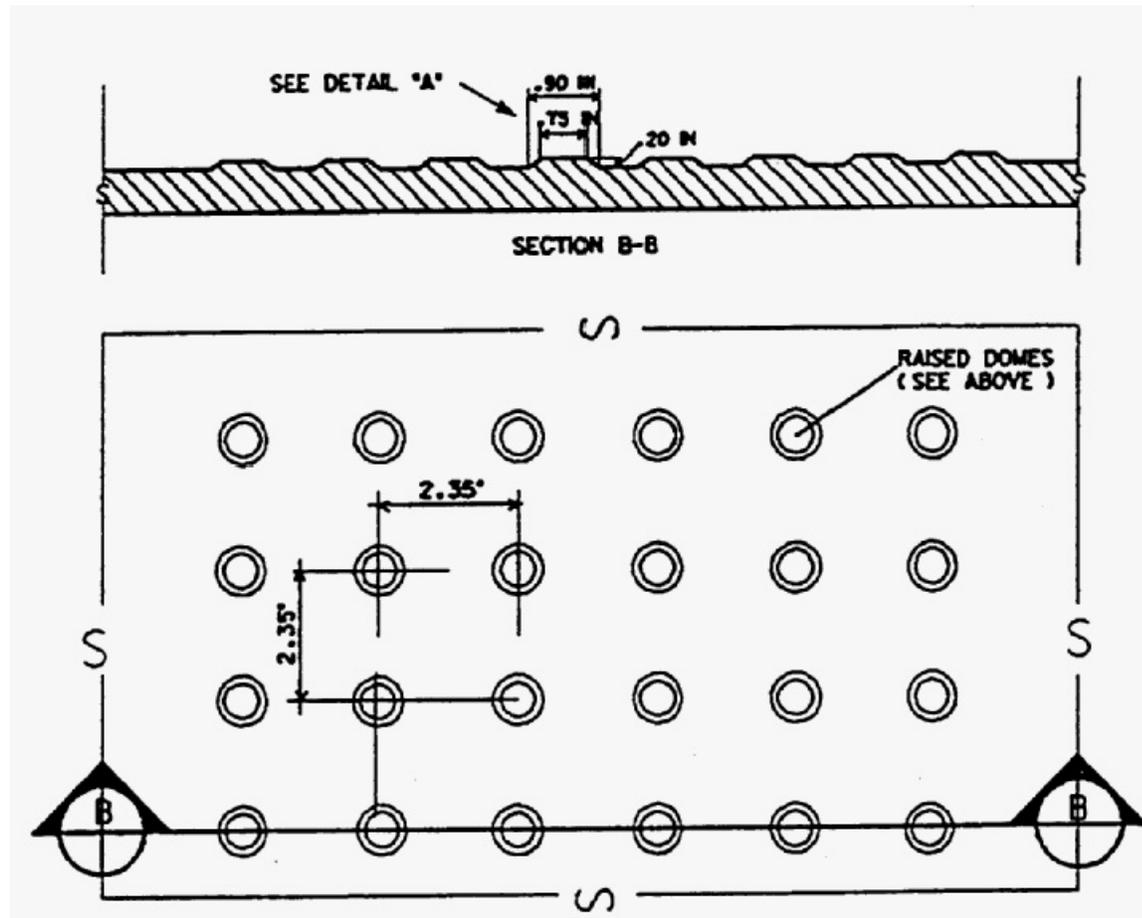


Figure 4-5 Returned Curb

